

The twenty-first quarterly meeting of the Society was held on the evening of August 25, 1906, at the residence of Miss Julia Wright, 2329 Pacific avenue, Alameda, California.

President Fuchs in the chair. Minutes of the preceding meeting were read and approved.

The following members responded to roll-call: Charles Fuchs, Miss Bertha Chapman, Mr. J. C. Huguenin, L. E. Ricksecker, O. E. Bremner, Dr. E. C. Van Dyke, Percy Baumberger, Leon Munier, Miss Julia Wright, and Dr. F. E. Blaisdell.

The following visitors were also present: Mrs. Charles Fuchs, Miss Bertha Brady, Mrs. F. E. Blaisdell, Mrs. Anna G. Blaisdell, F. E. Blaisdell Jr., Mrs. J. C. Huguenin, Miss Bessie Wright, Miss Ethel Wright, Mr. G. A. Wright, and Mrs. G. A. Wright.

After the reading of the treasurer's report the election of officers took place, with the following result: President, Charles Fuchs; secretary and treasurer, F. E. Blaisdell; assistant secretary, Leon Munier.

The present meeting of the Society being the first since the great earthquake and fire, which occurred on the morning of April 18, 1906, Dr. Van Dyke was asked to report as a matter of record all that he had learned concerning our local entomologists and collections.

Dr. Van Dyke responded as follows:

"The California Academy of Sciences was so much injured that it was only with the greatest difficulty that what few things were saved could be gotten out. Mr. Loomis, director; Miss Eastwood, botanist; and Miss Hyde, librarian, did what they could. There was saved simply the boxes containing the types of the Coleoptera, Hemiptera, and Hymenoptera. All else in the entomological department was lost, including the Behr collection of Lepidoptera and entire library.

"Of private collections, the greatest loss was that sustained by Mr. Charles Fuchs of 212 Kearny street, he having saved only about twenty-two boxes of specimens, these consisting of his generic collection of Coleoptera. His *Eleodes* were in the hands of Dr. Blaisdell, and were saved. Mr. James Cottle lost his entire collection of Lepidoptera. The Beverley Letcher collection of Lepidoptera and Coleoptera and library was stored in

Mr. Cottle's house, was also destroyed. Mr. J. C. Huguenin lost his collection. That would leave the collection of Mr. F. X. Williams, which was in the unburned district, as the only good collection of Lepidoptera in the city. Dr. F. E. Blaisdell had one of his two cases of Coleoptera overturned by the earthquake. This, of course, resulted in destroying several hundred specimens. All specimens of *Eleodes* loaned to him for purpose of study were saved and but slightly injured. The collection of Coccidae belonging to Mr. Edw. M. Ehrhorn was, so far as could be learned, unharmed. My own collection of Coleoptera was also unharmed. Outside of the city of San Francisco, the collection of Coleoptera of Mr. Edgar L. Ricksecker, of Santa Rosa, was entirely destroyed.

"This has been a tremendous blow to us all, and rare is the person who has not lost something. First was the earthquake, though causing the loss of a great many lives and much destruction of property, would not have been greatly noticed. It was the fire that did the great damage, destroying all of the city, except a fringe of residences; Dr. Blaisdell and I were, fortunately, in this belt. The Academy was in the midst of the conflagration.

"Dr. Blaisdell, will, I think, be able to remain in the city and to continue his work as before; Mr. Fuchs cannot expect any work for some time to come from the Academy, but fortunately has his craft to rely upon. He saved his tools, is cheerful and ready for hard work. None of our entomologists was injured, and all are hopeful for the future."

Beginning the scientific program of the evening, Dr. Van Dyke read a letter from Mr. F. X. Williams, who is absent with the California Academy of Sciences expedition to the Galapagos Islands. Mr. Williams reported fine success along all lines. Among the many insects taken was an arboreal cicindelid, a new record and without doubt a new species. The doctor then reviewed the species of *Necrophorus* and *Nebria*. Stating that there were four species and two varieties of *Necrophorus* found about San Francisco.

Dr. Blaisdell reported that he had finished the analytical work on the tenebrionid tribe Blaptini, and that he was returning the borrowed material. He also exhibited a new species of *Trogloderus*, the type being in the collection of the National

Museum at Washington, D. C. The doctor stated that the genus *Troglderus* would still be retained in the Blaptini.*

Percy Baumberger exhibited two boxes of Coleoptera. Mr. Huguenin showed males of *Xylotrechus obliteratus*, *Clerus* sp. and *Oberea quadricallusa*.

Mr. Fuchs passed around vials of insects taken from the ruins of the California Academy of Sciences. The vials had been hermetically sealed by the melting of the glass, and the contained insects were carbonized, but still retaining their shape.

Dr. Van Dyke exhibited a box of *Necrophorus* and one of *Nebria*. Mr. Ricksecker of Santa Rosa reported the facts relating to the complete loss of his collection from earthquake and fire.

Social discourse and refreshments then followed.

Adjournment.

F. E. BLAISDELL, Secretary.

The twenty-second regular meeting of the Society was held on November 25, 1906, at the residence of Miss Julia Wright, Palo Alto.

President Fuchs in the chair. The minutes of the preceding meeting were read and approved.

The following ten members responded to rollcall: Charles Fuchs, Dr. E. C. Van Dyke, Edwin M. Ehrhorn, J. G. Grundel, Dr. F. E. Blaisdell, Prof. Vernon Kellogg, J. C. Huguenin, Miss Julia Wright, Fordyce Grinnell, and Percy Baumberger.

Fourteen guests were present, as follows: Mrs. Charles Fuchs, Mrs. J. C. Huguenin, Mrs. F. E. Blaisdell, Mrs. Anna G. Blaisdell, F. E. Blaisdell Jr., George A. Wright, Mrs. G. A. Wright, Miss Bessie Wright, Miss Ethel Wright, Rose W. Patterson, D. T. Fullaway, E. J. Newcomer, Mrs. R. W. Doane, and C. K. Coolidge.

After the treasurer's report was read, Mr. C. K. Coolidge was proposed for membership in the Society; the proposal being seconded, action was taken, resulting in the unanimous election of Mr. Coolidge. President Fuchs then delivered an address of

* Changed to *Eleodiini* in the Monograph.

thanks to Miss Wright for the invitation extended to the Society to hold the meeting at her residence in Palo Alto.

Miss Wright responded and also stated that the organizing of an entomological society in Palo Alto was under contemplation, and wishes the co-operation of the Pacific Coast Society. She also suggested that it was time that an entomological publication for California be started, and that the new organization would, if possible, help in pressing the publication to the point of realization.

Prof. Kellogg, upon invitation, gave a most interesting talk upon the dipterous family Blepharoceridae, a family of small flies that is widely distributed, but becoming extinct, with but twenty known species. They possess a curious venation of the wings, a secondary venation due to the creasing of the wings during the pupal state. The eyes are compound and divided into two parts, the eye elements being different, with a possibility of two kinds of vision.

The larvae cling to rocks under the surface of the water in clear mountain streams; they die if the water becomes still or impure. It must be swift and charged with oxygen. Their structure is peculiar: Six suckers on the ventral surface, in transverse section, each one is seen to have a stopper and a muscle which pulls out the stopper and suction is produced; in this way it is enabled to cling to the rocks. In the swift water it cannot move; when it does move it shifts ends and moves sidewise. They feed on diatoms and other organic matter. They moult several times and then pupate where they lie. The pupa is a turtle-like object and at first was not recognized by students. It clings to rocks by a pair of respiratory horns which are leaf-like structures. In the pupa the fly gets ready to come out, having the wings completely developed and dry and the legs long.

The pupal skin ruptures along the back, and in making the emergence in the swift running water many perish. Specialization is good for the preservation of the species. Distribution—One species is found in Brazil, two in West Indies, one in Mexico, five or six in Europe, and six in North America. In Northeastern America, one species is abundant.

Dr. Van Dyke then made a few remarks upon the species of *Necrophorus* found in the vicinity of San Francisco. He spoke about the two common black species—*guttula* and *pustu-*

latus var. *nigritus*; also of three maculate forms—*hecate*, *vespilloides*, and *marginata*, which he had found here. *Necrophorus pustulatus* var. *melsheimeri* was credited to the State, but he had never seen any specimens from here, and doubted whether it would be found west of the Sierras. They are not uncommon in Arizona, and are probably also found in North-eastern California. He cited this genus to show how much thorough work in collecting was needed when such large insects as these species were, with the exception of two, practically unknown to most of the collectors about the bay. Specimens of this genus were then shown, all known American forms being represented except the Hudson Bay *obscurus* and *vespilloides* var. *pollinator*.

In a small box were shown species of the genus *Hetaerius*, including two of our three known California species—*morsus* and *californicus*; the first collected in San Francisco several years ago, and the second in the foothills back of Oakland this last autumn. The various species were spoken of, and mention was made of the fact that, though messmates with ants, very little was really known about their true habits, a field of investigation which was in great need of being exploited. Their distribution was discussed and the opinion ventured that our coastal belt would no doubt yield many new species of the same, as well as other small and markedly specialized species, when it was thoroughly worked over. The main reason given for this belief was that our coast belt was the largest belt of territory in this country that had gained many species from the North, and had been little affected by the ice age. This ice age in most other northern parts of our country, had almost entirely wiped out of existence the more lowly and more highly specialized insects. The winter season was the only season when *Hetaerius* could be found, and he advised those members who were partial to collecting to devote their energies during this season to close work, when, no doubt, they would be well repaid by getting many rare and interesting species such as the preceding, as well as some fungus lovers, etc. Those species which were simply hibernating could in most cases be found better at other times.

Prof. Bradley then spoke as follows of the National Entomological Society:

"Some two years ago at the Philadelphia meeting of the

American Association for the Advancement of Science a joint meeting was held by the Entomological Club of that association, and the local entomological societies, at which it was decided to inaugurate the next year a national entomological society, and a committee to devise ways and means for this purpose was appointed. In June of 1906, this committee, to which was added representatives from all of the local entomological societies of America, met at Ithaca, New York, and a constitution was drawn up and arrangements made to hold the initial meeting of the new society in New York during convocation week of 1906.

"To those who live on the Pacific Coast, a national entomological society being, as it must be, connected primarily with the East, may seem a far-away cry. I am convinced, however, that you will find it of as great importance to you as though you lived in the East. It can and should represent the entomological needs and thoughts of the country as a whole, and should not be sectional in its needs or open to the charge of being run by a 'click.' All of you who are so far away that you find it impossible to attend the annual meetings will, nevertheless, be able to throw your influence in whatever way you desire upon the actions of the Society. Much depends upon the way in which such a venture is inaugurated, and success of the movement depends more than you realize upon having a truly broad membership. I urge upon those present to join this new society and thus show your sympathy with the movement."

Mr. Ehrhorn then spoke on the possibilities of careful work in Entomology. Mr. Coolidge spoke on the distribution of *Colias alexandra* and *edwardsii*; the former being found in East Oregon, the latter in the Eastern Cascade Mountains, both in the Coeur d'Alene Mountains. Dr. Van Dyke exhibited *Hetaerius brunripennis* and *blanchardii* from New England, and *californicus*, and a new species from California. Mr. Coolidge exhibited specimens of *Colias alexandra* and *edwardsii*.

Discussion and refreshments then followed. Adjournment.

F. E. BLAISDELL, Secretary.

The twenty-third regular quarterly meeting of the Society was held on February 23, 1907, at the residence of Dr. F. E. Blaisdell, 1632 Post street.

President Fuchs in the chair. Minutes of the preceding meeting were read and approved.

Fifteen members responded to rollcall as follows: Charles Fuchs, Dr. E. C. Van Dyke, Charles Reidy, James Cottle, Percy Baumberger, Fordyce Grinnell, F. W. Nunenmacher, Miss Julia Wright, Edw. Ehrhorn, Dr. F. E. Blaisdell, J. C. Huguenin, F. X. Williams, L. E. Ricksecker, Leon Munier, J. F. Killeen.

The following nine guests were present: Mrs. J. C. Huguenin, Mrs. F. E. Blaisdell, J. C. Bradley, Mrs. Charles Reidy, Mrs. J. E. Cottle, Charles Von Geldern, Mrs. A. G. Blaisdell, Miss Bessie Brady, and F. E. Blaisdell, Jr.

The reading of the treasurer's report then followed.

Mr. J. C. Bradley was then elected to membership. Mr. F. X. Williams being present and having just returned from the Galapagos Islands with the California Academy of Science expedition, was asked to give an account of his entomological experiences.

He stated that five species of butterflies were observed there; *Pyrameis hunteri* were common, also *Agraulis vanillae* var., and that *Lycaenae* were represented. Five species of Sphingidae were found, *Deilephila lineata* being common. Noctuids were well represented, as well as micros. Diptera were rare, mostly found in cacti; although mosquitos were abundant, and where there was apparently but little water. They probably breed in the orchids, which are plentiful in the green belt. Chigoes were abundant and attacked the feet. Orthoptera were common, with three genera; they have been worked up by Snodgrass. Cockroaches were very common. Hemiptera were few, being found under stones and bark, and were observed feeding on caterpillars.

One hundred and fifty species of Coleoptera were taken. One species of nocturnal *Cicindela* was secured; *Calosoma* were plentiful; Dytiscidae, five species; Gyrinidae, one species; Hydrophilidae, one species; a few Staphylinidae were found in rotting cactus and on carrion; three species of Coccinellidae were taken; Dermestidae were common; Histeridae not common; five

species of Elateridae; Buprestidae, one small species; Cleridae, one species, and several Ptinidae; Scarabaeidae, two species; one species of *Trox* on the cactus; Cerambycidae, ten species; Chrysomelidae, two species; the Tenebrionidae were the most common of the Coleoptera; the Rhyncophora were numerous. Mr. Williams stated that four to five hundred feet elevation was the best altitude for collecting. Turning over logs and stones yielded the best results. Beating yielded little, and that, with the light, gave only fair results, especially on the beach. His experiences with the black steel pins was very discouraging, as they oxidized greatly in the moist air and soon became unsightly. Brass pins were the best. Capsules were bad on account of the dampness. Coleoptera were abundantly gathered from the cereals, especially on board the vessel.

Dr. Van Dyke explained the object of the expedition. It was to obtain all of the species possible before the natural conditions became changed by settlement of the islands. Cattle, dogs, and pigs have invaded the fields, and fire may start and destroy the fauna. Darwin did the first collecting there, and he was followed by others. The present expedition was the most successful. But thirty to forty species were heretofore known, while Mr. Williams took 150 species; some in large numbers, where other collectors took but one or two specimens. The collections are of value to determine the age of the islands. It has been thought that the fauna had been carried there by the wind, birds, and water currents, and that the islands were volcanic in origin. The islands are probably the result of subsidence, with the flora and fauna reduced thereby.

Mr. Nunenmacher gave an interesting account of his collecting in the vicinity of Nogales, Arizona, during August and September, 1906, which was very successful. Being especially interested in the Coccinellidae, his efforts were concentrated on that group, to obtain as large a catch in the family as possible. He took 17 genera, 49 species, and 2000 specimens. The following is the list: *Megilla maculata*; *Hippodamia convergens*; *Coccinella franciscana*, *sanguinea* and *abdominalis*; *Psyllobora*, new species; *Chilocorus bivulneratus* and *cacti*; *Exochomus pilatii*, and *bipunctulatus*; *Brachycanthus*, two species; *Hyperaspis*, a species close to *quadriavittatus*, *lateralis*, *octonotata*, *pin-guis*, *medialis*, *globula*, *pleuralis*, *fimbriolata*, *montanica*, and

NOTICE.

The accompanying Proceedings complete Vol. 1 of the Pacific Coast Entomological Society and they are the back numbers for which the donations were made.

ARRANGE the several parts of Vol. 1, according to the number of the meetings.

COMMENCE at and number the pages from page 76 continuously as issued - blank or otherwise so as to secure a regular and uniform pagination.

Frank E. Blaisdell, Secretary .

BOSTON

and to the following persons: (1) the President and

the Vice President of the United States; (2) the

Speaker of the House of Representatives; (3) the

Senate of the United States; (4) the

Attorney General; (5) the

Secretary of the Navy; (6) the

Secretary of the War; (7) the

Secretary of the Interior; (8) the

Secretary of the Treasury; (9) the

Secretary of the State; (10) the

Secretary of the Army; (11) the

Secretary of the Navy; (12) the

Secretary of the War; (13) the

Secretary of the Interior; (14) the

Secretary of the Treasury; (15) the

four species not yet determined; *Hyperaspidius*, two species not determined; *Cephloscymus occidentalis*; *Smilia marginata* (*Pentilia*); *Scymnillus aterrima*; *Scymnus*, fourteen species not yet worked up; *Thalassa montezumae*; *Epilachna corrupta* and a species of *Novius*.

The best results were obtained on the hillsides, in bunch grass with sweep-net. Very little was accomplished by beating.

Mr. J. C. Bradley gave a very interesting talk on the Evan-
iidae, a family of parasitic Hymenoptera. His talk was made more instructive by a large series of plates showing the valuable work that he is doing.

Mr. Ricksecker stated that years ago two species of *Orgyia* were quite plentifully taken: *Orgyia* (*Heterocampa*) *venusta*, on yellow lupine, and *O. gulosa* on shade trees. He exhibited the insect in all stages of development, from the egg to the imago, including living larvae in all stages. The female is wingless, and is taken on the willow.

Miss Julia Wright gave a short report of the progress of the Santa Clara Valley Entomological Society, and extended an invitation to the members of the Pacific Coast Entomological Society to attend their meetings.

Mr. Ricksecker exhibited a box of exotic Carabidae. Of especial interest were two species of *Callisthenes*, *eversmanni* from Amesia, and *semenovi* from Turkestan. Mr. Nunenmacher showed his fine series of Coccinellidae from Nogales, Arizona, and was particularly enthusiastic over *Cephaloscymnus occidentalis* Horn; he also showed Buprestidae and a new Histerid.

Refreshments and then adjournment.

F. E. BLAISDELL, Secretary.

The twenty-fourth and twenty-fifth meetings of the Society were omitted on account of a car strike.

The twenty-sixth regular meeting of the Society was held on the evening of November 23, 1907, at the residence of Dr. F. E. Blaisdell, 1632 Post street, San Francisco.

President Fuchs in the chair. Minutes of the preceding meeting were read and approved.

Twelve members responded to rollcall as follows: Charles Fuchs, Edw. M. Ehrhorn, J. G. Grundel, J. C. Huguenin, Miss Julia Wright, F. X. Williams, O. E. Bremner, J. F. Killeen, Percy Baumberger, Leon Munier, James E. Cottle, and F. E. Blaisdell.

The following nine guests were in attendance: Mrs. O. E. Bremner, Miss Baumberger, Mrs. Charles Fuchs, Mrs. F. E. Blaisdell, Miss Bessie Brady, Mrs. Anna G. Blaisdell, Mrs. J. F. Killeen, Mr. R. W. Doane, and Miss Mary Moser.

The treasurer's report was then read. This was followed by the annual election of officers, with the result: For president, Dr. E. C. Van Dyke; treasurer and secretary, Dr. F. E. Blaisdell; assistant secretary, Leon Munier.

Mr. Edw. Ehrhorn then made a few remarks of appreciation of the services rendered to the Society by the retiring president, Mr. Fuchs.

Mr. Williams reported the results of a collecting trip to Siskiyou County during the past summer.

Mr. Doane reviewed some entomological work done at San Diego, California; also results in collecting there in April. Some interesting Tipulidae were taken. On foggy nights he found insects very abundant about arc lights.

Mr. Bremner gave a very interesting talk on the White Fly. Mr. Huguenin reported the results of collecting Coleoptera in San Francisco County. Mr. Grundel told of his summer's collecting trip to Eureka. After which Mr. Ehrhorn spoke on the photographing of insects, with exhibits of photographs. He also reported a recent trip East and of the work done there in fighting insect pests, especially the gypsy moth.

Dr. Van Dyke then entertained the Society by telling of his recent trip to the Aleutian Islands, the results of which will be published later after the material has been worked up.

Dr. Blaisdell exhibited some species of Coleoptera taken during his collecting trip to Calaveras, Alpine, Amador, and San

Joaquin counties, among which were *Cicindela sierra*, showing variations in color from dark olive with a small apical lunule to the fully marked bright green examples with complete markings, *Deretaphrus oregonensis*, *Bius estriatus*, *Mycetina hornii*, *Liodes bicolor*, *Platycerus opacus*, and *Cenophengus debilis*.

Mr. Huguenin exhibited two boxes of Coleoptera taken about San Francisco. Mr. Baumberger, two boxes of Coleoptera; and Mr. Bremner, specimens of the white fly. Dr. Van Dyke showed two boxes of Coleoptera collected in the Aleutian Islands, many not heretofore recorded from that region. Mr. Williams, a series of Sphingidae taken in Northern California.

After considerable discussion and refreshments, adjournment.

F. E. BLAISDELL, Secretary.

The twenty-seventh regular quarterly meeting of the Society was held on the evening of February 22, 1908, at the residence of Dr. F. E. Blaisdell, 1632 Post street.

President Van Dyke in the chair. Minutes of the preceding meeting were read and approved.

Seven members were in attendance: Dr. E. C. Van Dyke, Charles Fuchs, J. C. Huguenin, Edw. M. Ehrhorn, F. X. Williams, Percy Baumberger, and Dr. F. E. Blaisdell.

The following four guests were present: Mrs. F. E. Blaisdell, Mrs. Anna G. Blaisdell, G. R. Pilate, and E. T. Creeson, Jr.

After the reading of the treasurer's report, the president delivered an address, reviewing the progress of Entomology on the Pacific Coast. He divided the work done into periods:

First Period—Before the 18th century, nothing done; two species were described from this coast; *Buprestis aurulenta* by Linnaeus and *Carabus taedatus*, the latter supposed to have been collected by Cook at Unalaska and given to Banks, it being described by Fabricius.

Second Period—First work was done by the early Russian voyagers or officials. The first descriptions were by Fisher, based on work done on the Aleutian Islands. The epoch-making voyage of the Kotsebue Sound expedition.

The doctor then reviewed the work done by Eschscholtz, Chamisso, Mannerheim, and Maeklin.

Third Period—From 1845 to 1885. The work of Leconte in describing species, the principal type regions being Fort Tejon, San Diego, and Colorado Desert. The material being mainly collected by Lawrence, Gabb, Vesey, and himself. Dr. George Horn was active from 1861 to 1865 in defining new species, on material from Tejon, San Diego, San Jose, San Francisco, and Northern California. Dr. Hans Hermann Behr, in the early fifties, contributed to our knowledge of Lepidoptera. Boisdual's work was to a great extent based on the material collected by Lorquin the elder. Henry Edwards worked here in the late sixties, also Behrens and Osten Sacken. In the seventies, Baron Osten Sacken described Diptera, collected by himself, as well as that received from friends. L. E. Ricksecker collected in Utah and Sonoma County, adding much to our knowledge. Prof. J. J. Rivers worked with Lepidoptera and Coleoptera. Charles Fuchs, in Coleoptera. 1885 was the beginning of a transition period. Casey's work was reviewed. In 1900 began a very distinct epoch. Many entomologists entered the State. The doctor stated that we had now to pass on the previous work and to work out new material. The work that is being done by Fall, Fenyes, and others was referred to. In the earlier epochs, material was sent East; now the work is being done here.

Immediately following the address, Percy Baumberger presented a gavel to President Van Dyke with a few appropriate remarks. Mr. E. T. Cresson, Jr., spoke of the work done by Osten Sacken in the seventies, and also that of Pilate in collecting Diptera in Louisiana.

Mr. Ehrhorn talked on the parasites of *Phryganidia* and reported that two new species were being bred.

Charles Fuchs reported his collecting trip to St. Helena and Placer County.

Mr. Huguenin exhibited the results of his collecting trip; Mr. Williams, a box of Sesiidae.

Mr. E. T. Cresson, Jr., and G. R. Pilate were then elected to membership in the Society.

A communication from Mr. L. E. Ricksecker was read. Mr. Ricksecker's address being 3676 Vermont street, San Diego, California.

Refreshments and discussion, after which adjournment.

F. E. BLAISDELL, Secretary.

The twenty-eighth regular meeting of the Society or Field-day was held at Muir Woods, Marin County, California, on May 17, 1908.

The following members participated in the outing: E. C. Van Dyke, J. C. Huguenin, F. X. Williams, Leon Munier, G. R. Pilate; Charles Fuchs, Edw. Ehrhorn, Percy Baumberger, Dr. F. E. Blaisdell, and E. T. Cresson, Jr.

Five guests were present as follows: Mrs. Charles Fuchs, Mrs. Anna G. Blaisdell, Mrs. F. E. Blaisdell, F. E. Blaisdell, Jr., and H. J. Quayle.

The weather was pleasant and warm. The Coleopterists captured many good things, among them: *Dendroides picipes*, *Platycerus agassizii*, *Platycerus oregonensis*, *Megapenthes elegans*, *Ernobius* sp., *Phymatodes aeneus*, *Pterostichus scutellaris*, *Bembidium spectabile*, *Leptalia macilenta*, *Trichothous latifollis*, *Coryphya bivittata*, *Trigonurus* sp., *Amnesia tumida*, and *Desmocerus cribripennis*.

The Lepidopterists found very little in their line. Mr. Cresson, Jr., secured many good Diptera. Mr. Ehrhorn, a few Coccidae. Mr. Fuchs obtained a few Pselaphides by sifting leaf mould.

The day was thoroughly enjoyed by all, and the several interesting catches made them enthusiastic.

F. E. BLAISDELL, Secretary.

The twenty-ninth regular meeting of the Society was held at the Cafe Bismarck, corner of Fourth and Market streets, San Francisco, on the evening of August 22, 1908.

President Van Dyke in the chair. Minutes of the preceding meetings were read and approved.

The following twelve members responded to rollcall: E. C. Van Dyke, J. C. Bradley, J. C. Cottle, G. R. Pilate, F. X. Williams, Leon Munier, Charles Fuchs, Percy Baumberger, Edw. M. Ehrhorn, J. C. Huguenin, Miss Julia Wright, and F. E. Blaisdell.

Seven guests, as follows: Mrs. Charles Fuchs, Mrs. F. E. Blaisdell, Mr. W. H. Lange, Walter Topp, Mrs. J. C. Huguenin, and Miss Bessie Brady.

After the reading of the treasurer's report, Mr. Walter Topp

and W. H. Lange were elected to membership, their names having been proposed and seconded.

The annual election of officers then took place, with the result that the same officers were re-elected.

Mr. Fuchs then followed with a report of a trip East and made remarks upon *Ignotus aenigmaticus* Slosson, with exhibition of specimens in the three stages of development.

Mr. J. C. Huguenin reported his summer's outing, and Mr. Ehrhorn reported the results of his visit to the Yosemite. J. C. Bradley gave an interesting account of his summer's work. Mr. Pilate made some remarks on his collecting in the hills about Mills Seminary, Alameda County, California. Mr. Williams gave an account of a trip to Carmel.

Mr. Ehrhorn urged the members to assist in adopting uniform names for insects, suggesting that a committee of five be appointed to take up the work. The suggestion was made a motion, and carried.

Mr. Ehrhorn made a motion that the president of the Society be a member of that committee; the motion was carried. The following four other members of the committee were appointed as follows: Vernon Kellogg, C. W. Woodworth, Edw. Ehrhorn, and J. C. Cottle.

Mr. Ehrhorn also drew attention to the Argentine ant, stating that it has been found in Oakland and that the species is a very destructive one. The ant was determined by Pergande, and is of great economic importance; endeavors are being made to check its spread. Percy Baumberger exhibited specimens of the ant.

The following communication from Mr. L. E. Ricksecker was then read:

"Dear Brethren of the net—The card, announcing the date of the twenty-ninth quarterly meeting of the Society, was received last night, perhaps a little late for a response to reach you in time for the meeting, but I will try. It is six or eight years since I have done any active collecting, but this season, having nothing else to do, and in this delectable climate, I have almost become a boy again. The season commenced in February with the beautiful little *Chrysobia virgulti*, and this is still flying, although not in as great numbers as in April. Even the omnipresent *Coenonympha californica* has subsided long ago,

but *virgulti* is still here and as pretty as a new calico gown. On March 14, I found *Philotes sonorensis* quite numerous near the Bennington Monument, on Point Loma and *Callophris dumatorem* was also moderately abundant. Then came *Nomiades antiacis*, flying in the upper ends of the many gulches of our big city park; also *Synchlœ cethura* and *reakertii* in rather small numbers. On March 28, I found a large colony of *Lemonias augusta* near the Sweetwater dam, and succeeded in reducing their numbers somewhat. About this time *Everes amyntula* was also flying in the gulches, where its food plant, *Astragalus*, is found.

Early in April, *Rusticus melissa* became abundant on some of the grassy bottoms of the San Diego River, and is still flying there. *Lemonias gabbii* was found singly on roads, and never abundant. The same may be said of *Basilarchia lorquini* and *Limenitis bredowii*. The month of May I spent near Campo, sixty miles east of San Diego and near the Mexican line. I had long wished to have an opportunity to collect in old Mexico, but was quite disappointed, for, although I crossed the line several times to the extent of half a mile or more, I could not see a bit of difference in the butterflies. Even *Coenonypha* was just the same.

During June, almost an entire month, I found the rare *Tharsalea hermes* in the canyons of San Diego. At this time the wild buckwheat, *Eriogonum fasciculatum* is in full bloom, and *hermes*, in common with many other butterflies, haunts the big patches of this beautiful plant in the more sheltered heads of the canyons. *Epidemia helloides* and *Calephalis australis* were found on the river bottomland, and *Rusticus acmon* and *Leptotes marina* nearly everywhere. The exquisite little *Brephidium exilis* commenced to fly in June, and fresh broods are still emerging. The month of July I spent on the Bolcan Mountain, east of Julian, in company with Mr. Frank Stephens, who is collecting birds and mammals for the University of California. The elevation is from four to five thousand feet, and the country with its running streams and oak and pine timber resembles Sonoma County somewhat. Just east of the Bolcan and the Cuyamaca, lies the desert, and from the same point we could see the Pacific in the far west, and the Salton Sea in the far, dim east. The top of the Bolcan seemed to be the 'Mecca' of *Argynnis semiramis*. They were observed flying up the can-

yons to the top, and there they seemed to remain, aimlessly fluttering among the ferns and poison oak patches. Nearly all of them were males. Among them were a few *Argynnis callippe*.

On the wild buckwheat were taken the following: *Thecla dryope* and *saepium* and *Gaeides gorgon*. Also several species of *Thanaos*. Of *Atlides halesus* I took only one specimen, it being probably too late for this beautiful flier. *Satyrus paulus* was found singly and rarely flying in the thick oak brush. Of the pretty *Nathalis iole* I took about a dozen, always flying singly and invariably in a roadway. Late in July, and only on the west slope of the Bolcan, near the top, came *Habrodius grunus*. At first it confined itself entirely to a few trees, a week later scattering somewhat to trees a little farther down the mountain. This was the great oak of that country, *Quercus chrysolepis*, a most beautiful tree of immense dimensions, although, except to feed *grunus*, seemingly worthless, as all the old trunks are badly decayed. On these oaks I also found the larvae of *Hemihyalca edwardsii*. *Papilio rutulus*, and *eurymedon* are both common on the mountain, but not as numerous as in the North.

Of Coleoptera, I collected only incidentally. Just now I am making raids upon the various species of *Cicindela* on the bay and ocean beaches. After the loss of my big collection, it is hopeless for me to ever have the like again. However, I am getting a deal of good, solid exercise and genuine fun out of it, and I do hope each and every one of you have had a similar good time during the season. I regret very much that I cannot be with you in body as well as in spirit, at the Cafe Bismarck on Saturday night, and trust that when the president calls the craft from labor to refreshment, someone with a great capacity, like brother Cottle, for example, will be delegated to 'schenk eins aus fur mich.'

Believe me sincerely yours,

L. E. RICKSECKER.

3676 Vermont Street, San Diego, California."

Mr. Fuchs then exhibited a leaf insect, *Phyllium scythe*. Mr. Huguenin, a box of lepidoptera and one of Coleoptera, among the latter were a pair of *Purpuricenus dimidiatus* Lec.; they were red with the elytral tips only black, and were beaten from *Eriodyction glutinosum*. Percy Baumberger showed a collection of Hymenoptera mostly collected in Sonoma County, Cali-

fornia. Mr. Ehrhorn, a specimen of *Carabus vietinghovii*, taken in June, at Rampart, Alaska. Mr. Pilate passed around several boxes of Lepidoptera, and Miss Julia Wright a box of Lepidoptera from Ceylon. Mr. Williams exhibited *Sesia polygoni*, which were raised from the stems of *Polygonum paronycha*; *Cydia cupressana*, very injurious to young cypress; *Euchaetias oregonensis* from Shasta County, and a species of *Merolonche*.

Refreshments and adjournment then followed.

F. E. BLAISDELL, Secretary.

The thirtieth regular meeting of the Society was held on the evening of November 21, 1908, at the Hotel Manx, San Francisco.

President Van Dyke in the chair. Minutes of the preceding meeting were read and approved.

The following thirteen members were in attendance: E. C. Van Dyke, J. G. Grundel, J. C. Huguenin, Miss Julia Wright, Walter Topp, Edw. M. Ehrhorn, Percy Baumberger, F. W. Nunenmacher, F. E. Blaisdell, Charles Fuchs, James E. Cottle, William H. Lange, F. X. Williams.

Three guests were present, namely: Dr. Carroll Fox, Mrs. J. Cottle, and Mrs. F. E. Blaisdell.

After the reading of the treasurer's report, Mr. Cottle reported the results of a trip to San Diego, stating that he took many *Hemileuca electra*. The males fly early, and the females about 2 p. m.; these deposited their eggs on the wild buckwheat (*Eriogonum*). He spoke of his enjoyable meeting with Mr. George Fields and L. E. Ricksecker of San Diego; H. C. Fall, Dr. A. Fenyès, Fordyce Grinnell, and Mr. Clemens, a lepidopterist, all of Pasadena; as well as W. G. Wright of San Bernardino.

Mr. Ehrhorn spoke on horticultural quarantine against insect pests. California first made laws in 1882. Fruit industry began to spread, and the discovery of the Cottony Cushion scale (*Icerya*) followed. The United States Entomologist appointed James Lick inspector, and also came to this coast and worked on the above pest. An Australian parasite was discovered, and they decided to send Albert Koebele to get it. He brought back the coccinellid beetle, *Novius cardinalis*.

The pernicious San Jose scale (*Aspidiotus perniciosus*) became severe on deciduous trees and plants; for ten years a sheep dip was used to fight it. Parasites were discovered. About this time quarantine was established and laws drawn up and officers appointed. All transportation companies then had to notify the authorities upon the arrival of plants, etc. On steamers from the Orient the passengers have to submit their baggage for examination; if fruit is found it is destroyed; if plants, they are passed on and red-tagged; if infested they are either destroyed or fumigated. In large shipments, as for nurseries and responsible persons, the shipments are allowed to be taken to the yards and there treated. Whether parasites are found or not, the plants are fumigated before they are allowed to go. If the parties are not responsible, plants are treated before they are allowed to go from the quarantine station.

In the case of imported scales, were it not for the parasites the country would be overrun with them. There are no parasites known for the Red Scale (*Aspidiotus aurantii*), which is an Australian scale, and an expensive method of fumigation is resorted to. An effort is being made to get parasites for all. The early settlers brought over our first pests. The Hessian Fly (*Diplosis tritici*) was first brought from Germany in straw.

The Elm Beetles (*Galeruca xanthomelaena* and *calmarien-sis*) are very destructive to the elms in the East. One of the worst pests in California is the Codling Moth (*Carpocapsa pomella*). There was an exhibition in 1849-50, and certain producers wanted to compare the apples of California with those of the East. Eastern apples were brought in and were wormy, and this is the history of the introduction of the Codling Moth. The *Eucalyptus* was raised from seeds when that industry began. There are no pests for it, but in their native country, Australia, they are abundant, scales and borers. There is a growing demand for the wood, and care must be used or its pests will be introduced.

Hawaii is very careful about pests. The country most strict is Algiers. The sea-coast is most protected, the interior less so; country borders are not protected and there is danger of pests being brought in.

Mr. Nunenmacher stated that 600,000 eucalyptus seedlings had been brought in several years ago, and as a result the para-

sites are here. He mentioned the live oak pest, *Phryganidia californica*, stating that it was extending its ravages to the *Acacia*, and was continually spreading, and that he considered it an introduced species. The pupae are light-colored. Other members took exception to this view, considering it a native species.

Dr. Van Dyke stated that the spread is probably due to the fact that the small birds are being killed or driven off by the small boys with guns. In Golden Gate Park, where the birds are protected, the parasites are few; just beyond the park limits the oak trees are defoliated. Dr. Blaisdell said that he had collected *Phryganidia* thirty years ago at Poway, San Diego County, California. It there infested the live oak.

Dr. Carroll Fox then followed with an interesting talk on the campaign against fleas:

"The old classification of infectious diseases into contagious, non-contagious and miasmatic, or disease contracted by direct contact, air-borne, water-borne and soil-borne, is fast becoming obsolete, since we have learned that insects play such an important part in carrying diseases. There are six diseases which are important to the National Quarantine Officer—typhus fever, smallpox, yellow fever, cholera, plague, and leprosy. Of these, two certainly are due to the bite of an insect, namely: Plague, being due to the bite of a flea, and yellow fever due to the bite of a mosquito. Besides these diseases, it has been found that sleeping sickness, trypanosomiasis and surra are due to the bite of a fly. The mosquito (*Culex*) is responsible for filariasis and dengue fever. The mosquito belonging to the genus *Anopheles* carries the contagion of malarial fever. Rocky Mountain fever and Texas fever are both due to the bite of a tick.

"The magnificent work of the British Indian Plague Commission has placed beyond a doubt that fleas carry the contagion of plague. Their experiments can be read in the Journal of Tropical Medicine. These experiments were done with four varieties of fleas: *Loemopsylla cheopis*, the common rat flea of India; *Ceratophyllus fasciatus*, the common rat flea of San Francisco; *Ctenopsyllus felis* and *Pulex irritans*. The experiments done with the first flea were all successful. Only two experiments were done with the second flea and both were suc-

cessful. With the *Ctenopsylla felis* they were not able to transmit plague.

"We have been studying the rat fleas of San Francisco and have examined about 15,000 and have found that, while the Indian rat flea is very common, the *Ceratophyllus fasciatus* predominates, and as both the experiments with the *Ceratophyllus fasciatus* were successful in India, there is no doubt that it may be as active in transmitting the disease in San Francisco as the Indian rat flea is in India.

"While studying the rat fleas, we also thought it would be interesting to study the fleas of the smaller animals found within the boundary line of San Francisco. We have, therefore, had an opportunity to search for fleas on the large skunk (*Mephitis occidentalis*), one variety of mole (*Scapanus californicus*), the pocket gopher (*Thomomys bottae*), the weasel (*Putorius xanthogenes*), the common field mouse (*Microtus californicus*), the ground squirrel (*Citellus beecheyi*), a species of cotton-tail (*Lepus bachmanii*); besides these we have examined fleas from sparrows' nests and from the nest of the brush rat (*Neotoma*) and about 3000 specimens from man. We have found in all something like twenty-two different species of fleas, some of them entirely new; some which have been reported before from the United States and some from British Columbia. The *Microtus* alone has furnished four distinct varieties, the *Ceratophyllus telchum*, a *Hystrichopsylla*, which is probably the *dippei*; an *Odontophyllus*, probably identical with the *charlottensis* and a *Ceratophyllus*, which is entirely new. The sparrows' nests furnished a variety which resembles the *Ceratophyllus gallinae*, but is a distinct species and has been described in Entomological News under the name of *Ceratophyllus niger*. From the mole a flea was obtained representing a new genus, which will also appear in Entomological News under the name of *Corypsylla ornatus*.

"The ground squirrel has furnished constantly two other varieties of fleas, *Ceratophyllus acutus*, and *Hoplopsyllus anomalus*. From the rabbit we have gotten a *Hoplopsyllus* and a *Spilopsyllus*, which I am at present identifying. The brush rat's nest furnishes four varieties of fleas, the *Hystrichopsylla dippei*, the *Ceratopsyllus sexdentatus* and one specimen of the *Odontopsyllus charlottensis* and one female specimen of a flea

with a double spermatheca, which I am unable to identify, but which I believe is new. From the weasel we have gotten *Ceratophyllus wagneri*. The gopher has furnished constantly the *Ceratophyllus ignotus*, while on the skunk we have not found any characteristic fleas, but have found as a constant parasite the *Pulex irritans*, or ordinary human flea. As an interesting fact, on several occasions we have found the squirrel fleas on the rats. This is particularly interesting on account of the finding of plague among the squirrels in certain parts of California."

The doctor then advised persons collecting fleas to keep all those taken from any one animal separate, with the proper data attached. He also stated that he was depositing types, and named specimens in the California Academy of Sciences.

Mr. Ehrhorn stated that he always has a small vial or two on hand, in which he places the specimens and then puts them in envelopes upon which he writes the data. Fleas should be preserved in 70 per cent alcohol.

Mr. Fuchs gave an outline of the work done at Berkeley in the fight against insect pests. Mr. Nunenmacher talked about his trip to Arizona; also, the Coleoptera collected in Goldfield, Nevada. Mr. Ehrhorn exhibited a collection of Coccidae and the white fly (*Eucrossus*). Mr. Cottle showed a number of *Hemileuca electra* collected at San Diego. Mr. Nunenmacher, a box of Orthoptera taken in Arizona; also, two boxes of Coccinellidae. Mr. Williams passed around a box of moths, butterflies, and grasshoppers. Mr. Topp exhibited some Denton Bros' mounts for Lepidoptera, and Mr. Baumberger a box of Hymenoptera and one of Parasitica.

Refreshments were served. Adjournment.

F. E. BLAISDELL, Secretary.

The thirty-first regular quarterly meeting of the Society was held on the evening of February 27, 1909, at Thompson's Cafe, O'Farrell street, San Francisco.

President Van Dyke in the chair. Minutes of the preceding meeting were read and approved.

Fourteen members were present: E. C. Van Dyke, J. C. Huguenin, Percy Baumberger, F. E. Blaisdell, J. E. Cottle, J. G. Grundel, F. X. Williams, Edw. M. Ehrhorn, Walter Topp,

Leon Munier, F. W. Nunenmacher, Charles Fuchs, Miss Julia Wright, William H. Lange.

The following six guests were in attendance: Dr. Carroll Fox, L. R. Reynolds, M. B. Mitzmain, Mrs. J. E. Cottle, Mrs. Leon Munier, Mrs. F. E. Blaisdell.

Following the reading of the treasurer's report, Dr. Carroll Fox, L. R. Reynolds, and Maurice B. Mitzmain were elected to membership in the Society.

Dr. Van Dyke asked the members intending to read papers to send in the titles beforehand, so that the program could be arranged before the meeting. A copy should also be given to the secretary, to be filed in the proceedings.

Mr. Nunenmacher then read the following epitome on the progress of the study of the Coccinellidae:

Mr. G. R. Crotch gives in his Revision of the Coccinellidae of 1870, 137 genera and 1341 species. In his revision of the United States species in 1874, 3 more genera and 14 species were added. From 1885 to 1905, J. Weise adds 18 genera, 326 species, and 61 varieties. From 1892 to 1896, Blackburn of Australia, in his Revision I, adds 7 genera, 93 species, and 7 varieties. In 1895, Dr. George Horn added 1 genus and 20 species. In 1896, (?) G. Lewis added 2 genera and 18 species, all from Japan. From 1899 to 1902, Colonel Casey added 18 genera, 238 species, and 10 varieties. From 1903 to 1908, Mr. C. W. Leng added 1 genus, 3 species, and 3 varieties. In 1905, Mr. Charles Schaeffer added 2 species. In 1905, H. F. Wickham added 1 species. In 1907, Dr. A. Sicard added 1 genus, 42 species, and 5 varieties. In 1899, Dr. F. E. Blaisdell added another species. H. C. Fall added 10 species; Mr. A. M. Lea of Tasmania added 4 genera, 20 species, and several varieties. The grand total being 192 genera, 2028 species, and 85 varieties. To describe the above it took 129 authors. Besides the above, Mr. Gorham described several.

Mr. Grundel reported a recent visit to the Tahiti Islands. Few Coleoptera, four species of Coccidae and the white fly were collected. Three species of Coccinellidae, one being *Coccinella abdominalis* and some other beneficial species were among those taken. The coconut weevil is very injurious there. A small ant seemed to be very destructive to other insects of the islands. Coccidae were very abundant on plants around the settlements,

especially on the imported plants. One species of *Catocala* and a large sphinx, as well as a large spider are very abundant there. The latter feeds on mosquitoes. A small lizard was also busy feeding on insects. In the dense forests very few things were found, even after careful search—a few moths and a species of *Satyrus* ?. There were originally 550 species of native plants. Now there are over 2000 with the introduced species.

Mr. Ehrhorn exhibited the scales brought back by Mr. Grundel. A discussion on the distribution of insects by the natives and commerce then followed. The discussion was particularly concerned with such insects as the Coccidae and mealybugs.

Mr. L. R. Reynolds stated that exhaustive collecting is a good idea, as the native fauna of most islands is being rapidly destroyed, or obscured by the introduction of other species.

Dr. Carroll Fox stated that species of *Sarcopsyllidae* were parasitic on the flea. Six of these mite-like organisms were found on a single individual. These parasites are so microscopic that twenty or thirty could easily get on a single flea. Dr. Van Dyke said that the early stages of these parasites occur in rats' nests and that they run over the ground in the larval stage, and finally get on their hosts.

Mr. Ehrhorn asked the members to collect Myriopoda and turn them over to him to be forwarded to Dr. Sylvester, who is an European specialist on the order.

Dr. Blaisdell reported that his monograph on the Eleodiini of the United States, would soon be issued as Bulletin 63 of the U. S. National Museum; 524 pages, 13 plates, and 8 text-figures, and that it had been nine years in preparation.

Dr. Van Dyke exhibited Eschscholtz's Atlas. Mr. Nunenmacher showed a box of Lepidoptera from Nevada. Mr. Grundel, a lot of cocoons of *Attacus ceanothi* and *cecropia*; many were hybrids. Mr. Ricksecker's list of the Coleoptera collected at San Diego was shown for the benefit of members who desired to obtain species from that locality.

Refreshments and adjournment.

F. E. BLAISDELL, Secretary.

The thirty-second meeting of the Society was not held. It was to have been a field-day on May 25, 1909.

The thirty-third meeting of the Society was held on the evening of August 28, 1909, at Thompson's Cafe, San Francisco.

President Van Dyke in the chair. Minutes of the preceding meeting were read and approved.

The following twelve members were present: Dr. E. C. Van Dyke, Charles Fuchs, F. W. Nunenmacher, Edw. M. Ehrhorn, J. C. Cottle, Dr. F. E. Blaisdell, J. C. Huguenin, F. X. Williams, J. F. Killeen, Percy Baumberger, G. R. Pilate, William H. Lange.

Five guests were in attendance: Mrs. F. E. Blaisdell, F. E. Blaisdell Jr., Mrs. J. E. Cottle, Mrs. J. C. Huguenin, and Mrs. L. Munier.

After the reading of the treasurer's report, Mr. Huguenin gave the results of a collecting trip to the Santa Cruz mountains. Mr. Williams reported a trip to the Lake Tahoe region. Mr. Ehrhorn talked about his summer's collecting and observations at Lake Tahoe. His account of collecting insects on the snow at Mt. Tallac was interesting.

Mr. Munier told about his work at Glen Ellen, Sonoma County, in June. There was very little to collect, as a result of two bad seasons—the first cold, and the second hot and dry. He made further remarks concerning a spider found in the streets of San Francisco.

Mr. Fuchs talked on the meat-gathering habits of certain wasps, as *Vespa occidentalis* or yellow jacket; also, of the insect-gathering habits of others, with special reference to a large wasp that he observed attacking a *Mygale* or tarantula, and afterward biting off its legs. Mr. Pilate discussed Mr. Fuch's observations.

Mr. Fuchs then referred to studies on the maculation of the common ladybird—*Hippodamia convergens*; the spots ranging from none to twelve and twenty-two, with other variations.

Mr. Nunenmacher stated that at Cactus Springs, Nevada, there was a cliff 300 feet long, that at the time of his visit was literally covered with *Hippodamia lecontei*; the whole region was red from the congregated ladybirds.

Mr. William Mann, who was attending Stanford University, made some very interesting remarks upon myrmecophilous Coleoptera and other small insects.

Mr. Newcomer reported some facts noted while at Lake

Tahoe. These referred to Lepidoptera observed at the summit of mountains, while some were only noticeable on the sides of the mountains.

Mr. Huguenin exhibited two boxes of Coleoptera, and Mr. Williams showed Lepidoptera from Tahoe, Eldorado County, California.

Adjournment and refreshments followed.

F. E. BLAISDELL, Secretary.

The regular quarterly or thirty-fourth meeting of the Society was held at Thompson's Cafe, O'Farrell street, San Francisco, on the evening of November 20, 1909.

President Van Dyke in the chair. Minutes of the preceding meeting were read and approved.

The following twelve members answered to rollcall: Dr. E. C. Van Dyke, Charles Fuchs, F. W. Nunenmacher, J. C. Cottle, Dr. F. E. Blaisdell, J. G. Grundel, Ralph Hopping, J. C. Huguenin, Miss Julia Wright, F. X. Williams, Dudley Moulton, and Percy Baumberger.

The following six guests were present: Dr. Creighton Wellman, Mrs. C. Wellman, Mrs. J. E. Cottle, Mrs. F. E. Blaisdell, Mrs. Charles Fuchs, and Mrs. J. C. Huguenin.

After the reading of the treasurer's report, a communication from Mr. L. E. Ricksecker, giving a note on the larva of *Gloveria medusa* Strecker, was read as follows:

"In the month of March, while hunting for *Philotes sonorensis*, near the Bennington Monument, on Point Loma, San Diego, I found a larva of *Gloveria medusa* on a buckwheat bush (*Eriogonum fasciculatum*). It was two inches in length, of a dark brown color, covered with long, brown hair, with gray tufts of hair on the sides and covering the feet. It had also a distinct white dorsal stripe about one-tenth of an inch wide. I fed it on buckwheat. It was strictly nocturnal and kept very quiet, generally sitting on the underside of a cactus leaf which I kept in the cage. On July 4, it commenced spinning a thin open-meshed cocoon among the buckwheat blossoms. In this loose affair, in which it was plainly visible, it transformed into a pupa on July 10, and on August 20 it emerged from this as

a beautiful, full-grown female imago. Prof. Fall informs me that he once found a larva of this species on *Adenostoma*.

San Diego, California, November 3, 1909."

Mr. Hopping made remarks on the habits of *Pleocoma fimbriata* and *behrensi*.

Mr. Fuchs told of his work in the Entomological Department of the University of California, especially his arrangement of the representatives of the different orders of insects, as follows:

"In order to make a collection of insects useful for demonstration in teaching Entomology in all of its varied phases, it is my aim to use the following method as far as possible. The method will be valuable in teaching the following subdivisions of Entomology, namely: Classification, Anatomy, Ecology, Economic, Medical, and Veterinary. A series of insect boxes covered with glass will be used, as follows:

"Box 1—Shall contain representatives of all the families of a particular order. This is illustrated by the box of Coleoptera containing representatives of 87 families. This will be useful in systematic and general courses.

"Box 2—Shall contain the dissected mouthparts of a representative species, together with other dissected parts useful in the classification of the families. This set will be useful in teaching taxonomy and anatomy.

"Box 3—Shall contain specimens illustrating the life history of a given species, representative of the family. This box is also to contain material which will illustrate habitat as far as possible. Such a set of boxes would be very useful in teaching ecology.

"Box 4.—This box will contain both the noxious and beneficial insects of a given family, together with important parasites. Thus, the viewpoint of economic and medical entomology is represented. As far as possible this case will show the kind of damage done. The series relating to medical entomology will include specimens of malarial and yellow fever mosquitoes; rat, gopher and squirrel fleas, relating to the transmission of bubonic plague; bot and warble flies and ticks affecting the domesticated animals and man, such as the Texas fever tick. With these will be included the scorpions and spiders, especially *Latrodectes*

mactans, the most poisonous species of spider known in California.

"Box 5—This box will contain representatives of all the orders of insects from Aptera to the Hymenoptera, inclusive. For a general review of all the orders at a glance, this will be useful.

"I have already worked up a large amount of material, with this idea of arrangement in view. Thus, I hope to work up a system which may be helpful to my co-workers in Entomology, and at the next meeting of the Society I expect to be able to present more material adapted to the plan outlined above."

Mr. Moulton gave an interesting talk on the work being done to suppress the pear thrips.

Dr. Wellman gave an account of his studies on the Meloidae and his method of classification; also, remarks on collecting in Africa.

The doctor also reported the death of Prof. Kraatz, a great authority on Coleoptera. At request from Dr. Wellman, the members all arose to their feet as a token of esteem to Prof. Kraatz. The secretary was instructed to write to Dr. Walther Horn, expressing the Society's sympathy to the Deutsches Entomologische Gesellschaft.

Mr. Cottle made remarks regarding the depth of cabinet boxes. Percy Baumberger exhibited a box of Hymenoptera. Mr. Fuchs, an exhibition box, it being No. 1 of a series he is preparing. Mr. Cottle showed a specimen of *Pyrameis*, a sport of *caryae*, resembling *atlanta*.

Adjournment and refreshments.

F. E. BLAISDELL, Secretary.

The thirty-fifth regular quarterly meeting of the Society was held on the evening of February 19, 1910, at Thompson's Cafe, O'Farrell street, San Francisco.

President Van Dyke in the chair. Minutes of the preceding meeting were read and approved.

Thirteen members answered to rollcall: Dr. E. C. Van Dyke, Charles Fuchs, F. W. Nunenmacher, James E. Cottle, Dr. F. E. Blaisdell, J. C. Huguenin, Miss Julia Wright, L. E.

Munier, F. X. Williams, Dudley Moulton, William H. Lange, Dr. C. Wellman, and William Mann.

The following guests signed the visitors' book: Mrs. J. E. Cottle, Mrs. C. Wellman, Mrs. F. E. Blaisdell, Mrs. L. E. Munier.

After the reading of the treasurer's report, Dr. Wellman and Mr. Mann were elected to membership in the Society, and their names placed on the roll of attendance.

Mr. Cottle and Mr. Williams reported results of collecting on Mt. Tamalpais at night, stating that 120 moths came to the acetylene light.

Dr. Van Dyke gave an interesting talk on the results of his studies on the Coleoptera collected on the Galapagos expedition of the California Academy of Sciences.

Mr. Nunenmacher made remarks about, and exhibited a *Zarhipis* larva.

Dr. Wellman stated that there was great danger in putting too much stress on specialized characters or characters of atrophy. Mr. Williams reported finding a meloid larva in a carpenter bees' nest, while on the Galapagos expedition. Dr. Wellman remarked that if it was so, it will be found to be that of a *Horia*, and points to a more recent relation to the mainland.

Mr. Fuchs exhibited some Coleoptera from Mexico. A peculiar species of Elateridae with an odd development of the under surface of the tarsi.

Dr. Van Dyke remarked that South America will prove to be one of the most interesting of all countries. It has many very primitive genera and species and intermediate forms. *Parandra* was cited as an example. The doctor then spoke of the death of Mr. Kirkaldy. The Society then instructed the secretary to write to Mrs. Kirkaldy and express the Society's regrets and sympathy.

It was reported that Mr. R. G. Pilate was in Colton and that he was thinking of making a change by going to the Imperial Valley. A report also indicated that Mr. Coolidge of Palo Alto was in Pasadena.

Adjournment and refreshments.

F. E. BLAISDELL, Secretary.

CORRESPONDENCE

Copy of the letter sent to the German Entomological Society:

Dr. Walther Horn.

My dear Doctor: The Pacific Coast Entomological Society at its thirty-fourth meeting, held on November 20, 1909, instructed its secretary to report to you for the Deutsche Entomologische Gesellschaft as follows: Dr. Creighton Wellman, who was present at the meeting on that date, reported the death of Prof. Kraatz. At his request the members all arose to their feet as a token of respect to Prof. Kraatz.

The members furthermore unanimously desired that the secretary write and express their regrets and deepest sympathy to the Deutsche Entomologische Gesellschaft for the loss that it had sustained through the death of so noted and valuable a scientist as Prof. Kraatz.

Very sincerely,

F. E. BLAISDELL, Secretary,
Pacific Coast Entomological Society.

4541 California Street, San Francisco, California, U. S. A.

The following is a copy of the letter received from Dr. Walther Horn in acknowledgment of the letter sent by the secretary of the Pacific Coast Entomological Society:

Gosslerstr. 18, Berlin—Dahlem.
(Gr. Lichterfelde).

19—VI—10.

The Pacific Coast Entomological Society,
Care of Dr. F. E. Blaisdell.

My dear Sir: Just this minute I have received your esteemed and kindly favor of June 4, including the letter of condolence of your Society to the German Entomological Society. I shall forward it to our Society, but hasten today to thank you for the great interest that the California entomologists take in our loss.

Please be kind enough to transmit our feelings to your

Society. With all my best wishes to you and all California entomologists.

Yours ever,

WALTHER HORN.

A copy of the letter sent to Mrs. G. W. Kirkaldy:

Mrs. G. W. Kirkaldy.

Dear Madam: The Pacific Coast Entomological Society at its thirty-fifth meeting, held on February 19, 1910, instructed its secretary to report as follows:

The members present unanimously expressed their regret and keen sorrow for the loss experienced through the unexpected and untimely death of Mr. Kirkaldy.

While they realize that a kind and loving husband and father has been taken away, they also know that science has lost a most valuable and capable worker.

And furthermore, the Society wishes to extend to you and your daughter and Mr. Kirkaldy's mother its deepest sympathy in your bereavement.

Very sincerely,

F. E. BLAISDELL, Secretary,
Pacific Coast Entomological Society.





The thirty-sixth meeting or annual field day of the Society was held on May 30, 1910, at Leona Heights, Alameda County, California.

The following members participated in the outing: President Fuchs, Dr. E. C. Van Dyke, Beverly Letcher, O. N. Sanford, F. W. Nunenmacher, A. Koebele, Miss Julia Wright, J. C. Huguenin, and Dr. F. E. Blaisdell.

The following guests were present: Mrs. Charles Fuchs, Mrs. F. E. Blaisdell, Mrs. J. C. Huguenin, Miss Bertha Chapman, Miss Bessie Wright, and C. S. Peek.

The members, soon after arrival, dispersed in various directions for the purpose of collecting.

Among the reported captures of Coleoptera during the day were one specimen of *Desmocerus californicus* Horn, taken from the foliage of *Sambucus glaucus*; several *Omus californicus* Esch.; *Cychrus interruptus* Men. and *C. cristatus* Harr. var.; *Cremastochilus angularis* Lec.; *Acmaeops tumida* Lec.; *Exochomus pilatei* Muls., and numerous other species.

The lepidopterists took a number of specimens and failed to report the same.

After collecting, a sumptuous lunch was heartily enjoyed. The members then rested and talked over the experiences of the day until time to start for home.

The weather was warm, but the season was too advanced for a very profitable outing.

F. E. BLAISDELL, Secretary.

1800 O'Farrell Street, San Francisco.

